THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. XXVII. WEDNESDAY, AUGUST 31, 1842. No. 4.

COMPARATIVE NOURISHMENT OF DIFFERENT KINDS OF FOOD.

ONE of the great obstacles to the discrimination of the nutritive properties of different kinds of food, appears to have been a distinction which has been insisted on by many between animal and vegetable matter. Yet if we compare vegetable and animal existence at their beginning, a very close analogy between them must force itself upon even a superficial observer. Both kinds of matter spring from seed; they are nourished by the media which surround them, and in all the relations of mere living beings their conditions are almost parallel. The vegetable kingdom, however, consists of species which are not endowed with the powers of locomotion, and hence we find their food is of a more elementary nature —carbonic acid, ammonia, water; while animals employ substances for their nourishment which are the products of the elaboration of these simpler elements. In this point of view, then, the assimilating apparatus of plants might be considered of a somewhat higher order than those of animals, just in proportion to the greater difficulty in the chemical operation of converting azote, carbon, hydrogen, oxygen, sulphur, and phosphorus into vegetable albumen, than of dissolving that substance in the animal stomach, and depositing it in another part of the body in the solid form of albumen or fibrin, with identically the same chemical composition, and similar or slightly modified physical properties. But further; vegetables are the incipient stage of animal existence, for plants are the only creators of living solids, if we may so speak; they serve to produce, from gases, the solids which, under the term of meat or muscle, we find in cattle in a modified form; so that the human body is purely of vegetable origin. This view has been amply confirmed by chemical analyses, which have demonstrated the identity in composition of the albumen of the pea, the curd of cheese, and the albumen and fibrin of the blood. Henceforth, therefore, it would appear that instead of assuming an animal substance as the type of nutritive food, we must recur to the vegetable kingdom, and form our standard at the source of all organic matter.

These considerations prepare us for appreciating the justice of the views of those who have pointed to the amount of the azote of plants as the indication by which we are to measure the nutritive power of vegetable food. There can be no doubt that an attentive examination of this subject will bear us out in the conclusion that substances derived from the vegetable kingdom are nutritious in proportion to the quantity of azote which they possess. But our present knowledge does not per-

mit us to say that such substances are *alone* endowed with nutritive power. Sugar is perhaps a striking instance in illustration of this exception. The familiar fact of the fattening of the negroes, and even dogs, during crop-time in the West Indies, would appear to negative such a position. Humboldt informs us also that he has frequently observed the mule-drivers, who carried his luggage on the coast of Caraccas, giving the preference to unprepared sugar over fresh animal food. In both of these instances, however, it is presumed, unprepared sugar, in other words, the juice of the sugar-cane, which might contain albumen and other matters, was employed; and even these were only used in conjunction with other articles of diet. Potatoes also are universally acknowledged to be far from the bottom of the nutritive scale; and yet the quantity of azote present in this vegetable is exceedingly insignificant compared with the amount which can be detected in even the inferior qualities of wheat. According to Proust, potatoes contain no gluten, nor has any subsequent investigator pointed out accurately the source of the azote which is unequivocally distinguished in all varieties of this vegetable.

Boussingault, a French chemist, who is well known by his chemical researches in South America, has contributed much to the elucidation of the relative nutritive properties of vegetables. He has examined a variety of the common vegetables employed as human food in connection with the amount of azote which they contain, and has formed a theoretical table or scale, arranged according to the results of his experiments. He has compared the numbers which he has thus deduced with the practical experience of farmers in feeding cattle, and has detected a most remarkable coincidence between the theoretical and practical inferences. In the following table we have calculated the equivalents, so as to correspond with the vegetables employed in this country. It is read thus: 100 parts of white French beans are equivalent in nutritive power to 120 parts of yellow peas, to 1096 of potatoes, and 2383 of turnips. A farmer, for example, in feeding cattle, would find that 120 parts of yellow peas would go as far in keeping up the strength and efficacy of his cattle as 2383 parts of turnips; for every one is familiar with the fact that a small portion of oats is sufficient for retaining the strength of a horse unimpaired; while if hay were employed for the same purpose, the amount by weight would require to be much increased:

White French beans	100	Farina of barley	212
Yellow peas	120	" of potatoes	225
Farina of cabbage	148	Barley	232
" of carrots	170	Indian corn	246
" of wheat	175	Potatoes	1096
Wheat	191	Carrots	1351
French wheat	193	White cabbage	1446
Rye	200	Turnips	2383

By an inspection of the preceding table we learn that those vegetables which contain gluten are the most nutritive bodies; while those substances which contain no appreciable quantity of this vegetable principle are comparatively low in the nutritive scale. Gluten is the substance procured from wheat-flour, by digesting the latter in cold water and pressing it

through a cloth. By careful washing, the whole of the starch is separated, and nothing remains in the cloth but a tough adhesive mass, insoluble in water. To procure this perfectly free from starch is a difficult problem. However, we have found that if it is well washed under a stream of water, and then digested frequently in water at the temperature of 120 degrees, it may be obtained tolerably pure. It should then be digested in alcohol. The latter takes up an oily matter which has been termed *proper gluten*, and leaves vegetable albumen. The quantity of proper gluten is very small, according to our trials. The great bulk, therefore, of what has hitherto been termed gluten is, in reality, albumen consisting of carbon, hydrogen, oxygen, azote, sulphur and phosphorus, in nearly the same proportions as the casein or curd of milk, the fibrin of the blood, and the albumen of serum and of eggs.

We beg to draw attention to the fact, which has been noted in the preceding observations, viz., that vegetables are nutritive in proportion to the quantity of gluten which they contain; because it has been shown (Glasgow Report), that in the usual mode of baking bread by fermentation, a portion of this nutritive matter is destroyed in addition to much material which we have already found to be nutritive. In some chemical works, the quantity of gluten contained in flour is stated as high as 24 per cent.; and 18 per cent. is a common quotation. To put this statement to the test of experiment, we procured half a pound of the best Scotch flour, and treated it in the manner previously described. After separating all the starch, we exposed it to the heat of a vapor-bath until it ceased to lose weight. We found the quantity of gluten to amount to 6 per cent. of the original flour. This is a decided proof of the great inferiority of British flour compared with that of Italy and other continental countries.

In order to form fermented bread, a certain quantity of flour and water is mixed together. Yeast is added to them, and the process of fermentation is allowed to proceed to a certain extent, when it is suddenly stopped by exposure to the powerful temperature of the baker's oven. Now it is necessary, in order to appreciate the nature of this process, that we should follow the yeast in its action. To two pounds of dough, the baker probably adds two teaspoonfuls of yeast. The yeast is a glutinous body, in a state of decomposition, which possesses the power of generating a similar action in sugar, when it comes in contact with that substance. The sugar is decomposed into alcohol and carbonic acid; while the yeast has increased in quantity, from two teaspoonfuls to probably double that quantity. This is obviously proved in the case of the use of leaven, which is quite analogous in its action to yeast. A minute portion of leaven is capable of communicating a decomposing action to a large mass of dough, and a minute part of the dough thus excited to fermentation will occasion a similar action in another mass of dough. It is clear, therefore, that the original mass of ferment has regenerated itself. Now, Liebig, from whom the chemistry of fermentation has received much elucidation, has shown that yeast or ferment, in order to re-produce itself, must act upon gluten; hence it is obvious that in the fermentation of bread, not only the sugar of the flour is acted on, but also the gluten or

albuminous and nutritive principle is decomposed. The yeast, moreover, is apt to communicate an impairing flavor to bread, and in this point of view it has been viewed by several scientific men, who have proposed substitutes. Mr. Henry, of Manchester, recommended water impregnated with carbonic acid; and Dr. Colquhoun tried, with various success, to mix alkaline carbonates with acids in the bread, so as to imitate the action of yeast, without imparting to the bread its disagreeable taste. But we are not aware that any one has taken up the subject in an economical point of view, or in relation to the destructive influence of the yeast upon the nutritive matter.

The preceding considerations induced Dr. R. D. Thomson to turn his attention to the subject, and with the assistance of an intelligent baker in the borough (Mr. Dodson), he has been enabled to arrive at some interesting results. Mr. Dodson, who has introduced a highly palatable and very wholesome bread, which is raised by the action of muriatic acid upon carbonate of soda, at his request made an experiment upon a large scale, and found that by the fermenting process, a sac of flour would produce, on an average, a hundred loaves, while from the same quantity of flour, by the use of the acid and alkali, the return was 107 loaves; hence there is a loss of 6¼ per cent. by the fermenting process; the deficiency depends upon the conversion of part of the sugar of the flour into alcohol and carbonic acid, also upon the destruction of part of the gluten or albuminous principle, by which means new yeast has been formed.—(Glasgow Report.) In support of this view, the following reasons are adduced:

According to a mean of eight analyses of wheat from different parts of Europe by Vanquelin, it appears that the quantity of sugar contained in flour amounts to 5.61 per cent. But the quantity lost by baking on the fermented plan, exceeds this number by one per cent. nearly. We are, therefore, necessarily compelled to ascribe this additional loss either to the starch or gluten of the flour. It is difficult to conceive any action which could destroy the starch unless it were first converted into sugar and then fermented; but chemistry does not enable us to suggest such a supposition, while the destruction of the gluten is forced upon us in order to enable us to account for the increase in the quantity of yeast. We conceive that the important fact of the loss of so much sugar and gluten in the production of bread deserves much careful attention. One fifteenth of the whole flour of this country used for the purpose of making fermented bread, is blown to the winds. In an economical point of view its importance is paramount.

With regard to the nutritive power of *sugar*, we have already referred to the condition of the negroes in the West Indies during the season of gathering the sugar crop, when sugar proves nutritive in conjunction with other kinds of food. Most persons are familiar with the experiments of Magendie, in which animals fed on sugar lived well for eight days, and then began to fall off, and ultimately died with all the symptoms of starvation. Starch, as the important constituent of flour, was given to animals by the members of the French Commission, of which Magendie was the reporter, and obviously the main instrument. In the pulverulent form, dogs would not even look at it. When made into a paste, with

water, dogs, rather than taste it, preferred to die of starvation. Even when cooked with butter, lard, sugar or bread, they refused generally to make use of it; and if some of them did partake of it for a certain time, they never failed to perish of starvation. *Gluten*, however, presented a remarkable contrast to both of the preceding substances. When obtained from wheat flour or from Indian corn, it presented a phenomenon which did not occur with any of the other immediate organic principles, all of which excited more or less repugnance in the animals to which they were presented. Gluten, whether with a faint odor or with a nauseous smell, was swallowed on the first day without difficulty by dogs, and they continued to make use of it for three months without any interruption. The quantity taken daily amounted to about four or five ounces, and the animals preserved all the characters of perfect health. Gluten, then, appears to present an anomaly; for all the immediate principles, such as fibrin, gelatine, albumen, &c., were never able, when taken *per se*, to contribute to the proper nourishment of animals. Instead, therefore, of depreciating the nutritive power of bread, and impairing its quality by the action of yeast, it would appear that the object ought to be to add more gluten to the flour when that principle is deficient in quantity.

Now, it appears that what was formerly termed *legumin*, or the albuminous principle in peas, exists in this vegetable to a considerable extent. The flour of peas might, therefore, be advantageously used to improve the quality of flour; split peas, ground to a fine powder, would probably be a more grateful addition. By the laboring classes peasemeal is much used, especially in Scotland; and, looking at the physical power of the inhabitants of that country, we should be inclined to conclude that the food which they use must be of a character eminently adapted to sustain strength. By the Scotch laborers, too, fermentation is not considered essential to the production of bread as it is by many who ought to know better. Panification and fermentation are terms which are frequently confounded together. Now nothing can be more obvious than that bread may be either fermented or unfermented, leavened or unleavened. Nor is it necessary for its digestion that bread should be fermented or decomposed, as the operation might be more aptly denominated. The Jew does not labor under indigestion when he has laid aside his leavened bread during the passover, and applied himself to his unleavened cakes. The same observation applies to the barley, peas and oat-bread of the Scotch peasant, and also to the cakes of Upper India; for we believe that from Delhi to Cabool, the only kind of bread employed is wheat cakes, similar to what are termed *scones* in Scotland. Biscuits belong to the same category, and are even administered to invalids when other varieties of bread are considered unsusceptible of digestion. Bread, however, as we have seen, may be raised or rendered vesicular by chemical means, without having recourse to the decomposing process; and we doubt not that the means hitherto used for this purpose may be greatly improved, so soon as scientific care shall be bestowed upon this important branch of economy. We have already mentioned a variety of excellent bread baked with carbonate of soda and muriatic acid, now used to a considerable extent in London. We understand, also, that Dr. R. D.

Thomson, of Glasgow, has succeeded in making an excellent white bread by the employment of ammoniacal alum and sesquicarbontate of soda, which might be particularly recommended to invalids. The former salt consists of 1 atom sulphate of ammonia, 3 atoms sulphate of alumina, and 24 atoms of water. When sesquicarbonate of soda is acted on by this salt, the alumina is precipitated, and sulphate of soda and carbonate of ammonia (which is driven off), are generated, while free carbonic acid is evolved. The consequence is that the bread rises well, even better than that with soda and muriatic acid. The few grains of Glauber salt produced, will either have no effect or a beneficial one, and when it is desirable to avoid the formation of even this minute quantity of the salt, instead of sesquicarbonate of soda, the sesquicarbonate of ammonia may be employed. The discharge of gas is slower than when a liquid acid is used; the consequence is that the process bears a more striking resemblance to the common operation of baking by fermentation, and the vesicular structure of the loaf is thus rendered more agreeable.—(Glasgow Report.)

We have recommended the addition of peas to flour, on account of the large amount of albumen which the former contain. In the common pea the average quantity is about 18½ per cent.; kidney beans contain 18¼ per cent. The importance of these vegetables in a nutritive point of view is therefore highly worthy of attention. The objections commonly urged to it in consequence of its flatulent nature, may be overcome in a great measure, if not entirely, by digesting it in water at about the temperature of 100 deg., for several hours before it is used. In soups, for example, it might be used with great advantage to produce a body to that article of diet. Its employment is to be particularly recommended as a wholesome and nutritive ingredient in the food of the poor; and, as will be subsequently shown from the experiments of Magendie, it is greatly to be preferred to the gelatinous matter usually employed in the manufacture of soups. Cabbage, according to Boussingault, is a very nutritive substance, and when dried and reduced to flour it contains a very large quantity of azote.

[To be concluded next week.]

A BIOGRAPHICAL SKETCH OF PROFESSOR DRAPER, OF THE NEW YORK MEDICAL SCHOOL.

[Communicated for the Boston Medical and Surgical Journal.]

John William Draper was born in May, 1811, near Liverpool, England, of respectable parents, his father being an influential minister in the Wesleyan Methodist church. He was early trained to letters, and admitted at the age of 11 years into Wood-house-grove Academy, one of the Collegiate Institutions of the Methodists in England. In this distinguished seminary he showed such proficiency, that he attained the highest position in the classes in two years, a period less than half that usually allowed for entrance into the senior department. At 14 his attention was turned to the ministry, and he undertook the study of He-

brew, and the Scriptures, with great zeal, and continued his pursuit until his acquaintance with ecclesiastical writers became considerable; but his taste for experimental philosophy, encouraged and shared by his father, finally caused him to abandon the clerical profession. At this period his proficiency as a linguist was highly creditable, and he had reviewed his *humanities* with the Rev. —— Robison, A.M., of Oxford, a man of much scholastic pretension.

In 1827, the London University opened its doors to the public, and the subject of our sketch entered with the first class as a student in law, philosophy, chemistry, and English literature. Never did the hopes of the founders appear so fully realized as in the first sessions of the University; from all quarters of the world, from the highest positions of society, students, already men of reputation, flocked—an athenæum, a magazine, a forensic society, sprang up, and were maintained with enthusiasm—here epigram, satire and logic met; and a Thompson, Sylvester, Draper, Macaulay, Herdman, Wreathmüller, gave life and interest to the scene.

At the age of 17 years his father died, and there devolved upon his care the charge of a large family; and although harassed for several years with constant law suits, he steadily pursued his studies, devoting his attention especially to chemistry, under the tuition of the late Dr. Turner. His leisure time was devoted to his private laboratory, and furnishing papers to the literary periodicals. To the Ladies' Magazine of 1831–2 he was a frequent contributor of poetry, which was read with much applause, and betrays the originality, vigor and beauty of his style. His connection with Dr. Turner during 1832 became more intimate, and he resorted to that chemist's laboratory, and study, with the freedom of a friend and co-laborator. Indeed, his researches in chemistry were already directed to original discoveries, and the first work he accomplished was in 1833, when he analyzed a fossil hydro-carbon from Sheerness Cliffs.

In June, 1833, he determined upon accepting the pressing invitation of his friends in Virginia to remove to the new world, and arrived in Mecklingburg Co., Va., in August. His maternal uncle, the late Commodore Ripley, of the U. S. Navy, had settled in America many years before, and it was in consequence of the solicitation of certain members of that family, added to a native respect for republican institutions, that he sought our continent. Although suffering from the effects of bilious fever, and laboring under mental distress for the loss of his invaluable mother, he addressed himself to scientific pursuits, and in 1834 furnished three papers to Silliman's Journal on capillary attraction, and a new form of galvanic battery, remarkable for simplicity and compactness.

In 1836 he graduated at Philadelphia as doctor of medicine, and so great was the opinion of the faculty of the University of his thesis on Absorption, that they desired its publication in the American Journal of the Medical Sciences for May, 1836. During his stay in Philadelphia he became a member of the Franklin Institute, and the American Philosophical Society, and enjoyed the friendship of the scientific and medical men of that city. He also appeared at the Franklin Institute as a public lecturer.

After practising medicine a short time in Mecklingburg, he was appointed alternate Professor of Chemistry at William and Mary College in that State; and in November, 1836, was inducted into the chair of Chemistry and Natural Philosophy in Hampden Sidney College, Virginia, at that time under the able superintendence of the Rev. Dr. Carrol, of Philadelphia. Here, a good library and a valuable set of philosophical instruments, collected by the late President Cushing, whetted his ardor in scientific pursuits, and for three years he lived the life of a severe student, rising with the sun, and retiring at the early hours of morning. During this eventful period he contributed a series of monthly papers to the Journal of the Franklin Institute on solar light, containing many extremely delicate and valuable researches into the properties of the spectrum. He furnished several quarterly papers to the American Journal of the Medical Sciences on absorption, glandular action, and the penetrativeness of membranes, all of the greatest importance to physiology; and reconciling the differences of the other investigators of these topics, Drs. Mitchell and Graham. These communications attracted so much attention in continental Europe, that nearly all were translated into the German language. The London and Edinburgh Philosophical Magazine, the highest scientific journal in the English language, also received several papers from him on the topics of thermo-electricity, and the habits of electrical currents; which have led to the discovery of those laws of velocity and tension, which the late Professor Ritchie failed to elicit, and have attained for the subject of our sketch a reputation as an electrician, in England, only second to that of Farady. Nor was he satisfied with his own attainments, but reviewed the pure and mixed mathematics, and studied the divine performances of Laplace. In the study of nature he also took great pleasure, and solicited the Trustees of the College to add a course of Physiology and Geology to his other duties. In literature he contributed several reviews and papers to the Southern Literary Messenger, under the signature of Delta, which have been admired for their originality and perspicuity. In 1838 he was consulted by the Committee of Congress on the Smithsonian legacy, and furnished an admirable scheme for its appropriation.

In the spring of 1839, he was appointed to the chair of Chemistry and Natural History in the University of New York, which he now fills with so much reputation. In that city his triumphs have not been few, although his time is more occupied, but the fame of having produced the first portrait from nature by the process of Daguerre, cannot be overlooked, especially as the inventor of the art deemed it impossible. His ambition has taken a new direction at present, and he has devoted his talents to the art of public lecturing, with what skill, the applause of audiences of eight hundred professional men and students can testify, as well as the publication by them of three lectures of his course during the last winter. He has also re-printed an edition of Dr. Kane's Elements of Chemistry, with incorporated notes.

Such are the achievements of Dr. Draper, a man, who, although only 31 years of age, is the correspondent of Herschell and Farady, the invited guest of the British Association, the friend of Silliman, Hare,

Bache, Henry, Elliot, and all our scientific men. So adjusted is his social character, that whilst he possesses a friend in every acquaintance, he is without an enemy in the whole world.

We have not felt any difficulty in introducing this narrative of facts —they all allude to his public career, which is open to everybody; on the contrary, it has been thought advisable to correct an erroneous notice already put forth. Such sketches are useful in a twofold sense; they furnish a stimulus to exertion on the part of the subject, and point the attention of men to meritorious individuals whose position or taste may make them objects of little public attention.

Prince Edward Co., Va., August 12, 1842.

THE CLARENDON SPRINGS, IN RUTLAND COUNTY, VT.

To the Editor of the Boston Medical and Surgical Journal.

Dear Sir,—Notwithstanding the observations which have been made at different times, by various individuals, of the recuperative qualities of the Clarendon-Spring waters, I must say that I do not believe their beneficial agency is fully appreciated, and that their value in mitigating many diseases is yet to be made known by a more liberal use of them.

These waters are called *mineral waters*, from the fact that they are impregnated with mineral substances, which they contract from the different strata through which they flow. Mineral waters are necessarily diversified in their nature, and are generally arranged under the four heads of *carbonated*, *sulphuretted*, *chalybeate* and *saline*. The waters which form the basis of these remarks, contain the carbonate of lime, sulphate of soda, sulphate of magnesia, &c., which are held in solution by the carbonic acid which they contain. From the fact that many people condemn these waters as being no better than any other spring water, through their ignorance of the medicinal properties they possess, I subjoin the following analysis of them, as given by Professor Hayes, of Roxbury, Mass. One United States gallon, being 236 cubic inches, was ascertained by him to contain of nitrogen gas, or azote, 9.63 cubic inches; carbonic acid gas, 46.16 cubic inches; besides atmospheric air. Saline matter, 5.76 grains—consisting of carbonate of lime, 3.02 grains; muriate of lime, sulphate of soda, and sulphate of magnesia, 2.74.

The gas evolved from these waters was also analyzed. The results obtained from 100 cubic inches, were as follows:—Carbonic acid gas, 0.05; oxygen gas, 1.05; nitrogen gas, 98.45.

There is a calcareous deposition around the springs, which consists of carbonate of lime, oxide of iron and carbonate of magnesia.

As these waters are light and gaseous, and contain but a small amount of cathartic properties, they pass very rapidly into the circulation, by the *endomose* operation which is continually going on in the intestinal mucous tissue; thus proving a most powerful diuretic. During a short stay in the month of July at these mineral fountains, I had the pleasure of seeing many, who, when they came there, were laboring under the paralyzing hand of disease, leave with a wonderful degree of elasticity

of spirits, invigorated strength of body and of mind; with an increased desire for life, and the many blessings which an indulgent Heaven has seen fit to bestow upon us. But, notwithstanding all this, very few, comparatively speaking, are apprised of the remarkable sanative powers these waters possess over a large number of diseases, or the great degree of certainty with which they eradicate various diseases which have for years resisted every conceivable mode of treatment. While there, I was astonished to see with what rapidity they effected cures in various exanthematous affections of the surface, with skin preternaturally dry and hot; the relief they afforded was immediate and permanent.

But the appropriateness of these waters is not confined altogether to affections of the cutaneous tissues. In affections of the pulmonary organs, and especially those which arise from a scrofulous diathesis, they afford relief, and many times prove curative. If this be true, how important it is that their power in mitigating the sufferings attendant upon these complaints, should be made more extensively known.

There are still other forms of disease, over which these waters have exhibited their power; and among them we may reckon affections of the renal organs, and in particular where there is a calculous deposition.

Mr. Rhodes, of Taunton, Mass., who, from an affection of the kidneys, had been for years nearly incapacitated for business, and at times had suffered intensely, arrived there a few days before I did. Being anxious to get relief, if possible, he went directly from home to Saratoga, in order to avail himself of those delectable waters. He drank of them for awhile, with no benefit; and feeling a great reluctance to returning home without a mitigation of his sufferings, he came to these springs. After drinking of these waters for a few days, he told me that they had given him more relief than either physician or anything else had ever done. He took me into his room, and showed me eight or ten calculi in the vessel, the size of a small pea, which he said he thought came from the renal organs. He thought, after drinking of these waters for a few days longer, he should be able to return home free from any disease.

In dyspepsia these waters have been found singularly beneficial. Indeed, the benefit derived from them in derangements of the digestive organs, by those who drank of them while I was there, more than answered my expectations. Another disease, over which these waters have a remarkable sanative influence, is that kind of disease which developes itself in branny scales over the surface, technically called furfuraceous herpes.

LEVI ALDRICH.

Shrewsbury, Vt., August, 1842.

GROSS IGNORANCE, UNDER THE GUISE OF HOMŒOPATHY.

To the Editor of the Boston Medical and Surgical Journal.

SIR,—A few evenings ago I was called to a young woman, who had been visited for some days by a "homœopathic physician" as his sign denotes, residing in Wesley place, Hanover street. I was told he had

left for her a recipe, which I copy and retain:—R. Sub. mur. hyd., grs. xx.; pulv. opi., ʒj.; quinine, ʒj.; chattes, 2. The direction being for the patient to "take one of the powders now and the other bye and bye if she should not be relieved"! The prescription was sent to Mr. J. F. Eliot, apothecary in Hanover street, who promptly refused to prepare what he then said he believed would be a fatal dose.

A single grain of opium is called a dose for an adult. Here are 30 grains, equal to 900 drops of laudanum—more than three quarters of an ounce—and this to be *repeated* if the sufferer (who, by the bye, had but little pain at the time) should not be relieved! Who doubts the perfect and lasting relief that would follow this dose? Again—of quinine two grains are considered to be a sufficient dose; rarely more than ten grains are administered at one time. In this prescription thirty grains are directed, equal to two and a half ounces of best Peruvian bark—and this also to be *repeated.*

The author of this highly poisonous compound, I am told, was about two years ago the driver of a baker's cart; but relinquishing that honest employment, he at length, by the advice of a much-respected dentist in this city, took up with the trade of homœopathy. C. H. STEDMAN.

7 *Hanover street, Aug. 20th,* 1842.

BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON, AUGUST 31, 1842.

MEDICAL REFORM.

A FRIEND has presented us with a pamphlet by Sir James Clark, physician to the Queen of England, whose name is familiar to all readers, entitled "Remarks on Medical Reform, in a Letter addressed to the Hon. Sir James Graham, one of her Majesty's principal Secretaries of State." What would be a medical reform in London or Great Britain, would be quite unnecessary here; and although our medical neighbors are continually harping upon the subject of some modification of the existing state of things, on the whole no advancement has been made, progressive as the science is, that precisely meets the approbation of the agitators of this long-cherished and favorite topic.

In the United States, there can be no law enacted by Congress regulating the practice of physic and surgery, as with the British Parliament; each individual State has the uncontrolled privilege of legislating in this respect for its own inhabitants. Under these circumstances, therefore, it is quite useless to attempt establishing a uniform system of education or code of medical police. If any one school or university raises the standard of requirements, ten chances to one if it is not forsaken unless all others do the same—for students are prone, as an element of their nature, to go where there is the least to do, and the smallest sum to pay. Quite another state of things is found in England. The point desired to be gained there, is to make all surgeons, phy-

sicians; and all physicians, surgeons. Necessity obliges most practitioners to be some of both in this country; but there, the College of Surgeons teaches one branch, and another institution another. The discovery was long since made here, that a medical man can and should practise both, to some extent, to be of any value to society. But Sir James Clark asks for a little more—he would have the first degree a *bachelor*, and a great while after, a second, of *doctor of medicine*. "This," says our court author, "I consider one of the cardinal points of medical reform, and one against which, I have never heard a single sound argument advanced." He admits, substantially, that there should be a superior order, who should be physicians and surgeons of hospitals, lecturers in medical schools, and examiners. "In short, this class would alone be eligible to such honorable appointments as will prove a sufficient stimulus to insure an abundant supply of highly educated men as successors to the physicians and surgeons of the present day." Such a doctrine as Sir James thus forcibly promulgates, will never be popular in North America. The idea of having a privileged class in the profession, like the aristocracy of his own country, to ride triumphantly over the heads of a second order, who are designed simply for mending broken heads and purging the vulgar public, will not find friends nor advocates in a republic.

So far as Sir James Clark investigates the propriety and obvious utility of blending the two professions in the same person, we second the motion; yet it is, after all, medical reform on the other side of the Atlantic, and in no way needed in the new world.

Our neighbor, the editor of the New York Lancet, has it much at heart to raise the standard of professional requirements. This is praiseworthy; but he would say, we are sure, that the scheme proposed by Sir James would find no friends with us—nor should it. No privileged orders of men can be tolerated—and especially, no surgeons or physicians, whose reputation depends upon special acts of the General Court. Let him be honored who merits the applause and gratitude of those who know him best.

Medical Society of Tennessee.—The published proceedings of the thirteenth annual meeting, at Nashville, making a pamphlet of seventy-three pages, came to hand last week. Dr. A. H. Buchanan, of Columbia, was elected President; Dr. Geo. Thompson, Vice President; Dr. J. Shelby, Treasurer; Dr. Waters, Corresponding, and Dr. R. Martin, Recording Secretaries. They do business spiritedly in Tennessee. Drs. Edwards and Gooch, for being absent, were fined two dollars—served them rightly. Drs. Irwin and Curry also fined two dollars each, on the same account. A few such examples will give the Society a full house. Dr. Richardson, of Stewartsboro', is appointed the next orator—and may be mulcted in the sum of fifty dollars should he disappoint them. An essay on the *Theory and Pathology of Fever*, by Dr. Buchanan, read by the author, although a hackneyed subject, seems, on a slight examination, to have been a creditable performance. We may, perhaps, give some extracts from it, but make no promises.—No one can read the doings of the Society without being particularly struck with the off-hand mode with which they bring up recusant, tardy, negligent members. There is something spirit-stirring about it that is amusingly original.

New Haven Medical Association.—As it now stands, the constitution of this Association is similar to the one adopted by the physicians of Boston. The medical gentlemen of New Haven have guarded every avenue by a judicious system of by-laws, so that it seems impossible to have any misunderstanding with each other, on any professional occasion. There is one article of the by-laws which we sincerely wish was a part and parcel of the regulations in this city. In fact, it recommends itself everywhere, since it recognizes the truth of an old proverb, that "*short settlements make long friends.*" The commendable article is as follows —"When circumstances permit, every physician (in New Haven) shall present his account immediately after attendance, in case of sickness. This shall particularly be attended to, in cases of midwifery. In ordinary cases of attendance in families, an account shall be presented every January; and it shall be an invariable custom to endeavor to settle all accounts in that month, or at least, annually." A remissness among physicians in collecting bills, regularly and promptly, gets the people in the way of thinking that it is of no consequence to pay the doctor. The physicians are themselves to blame; and much of the poverty that too many of the craft complain of, arises from their own heedlessness and neglect in bringing their accounts to a seasonable settlement.

Worm-trap—a new Remedy.—Dr. Stockbridge, Jr., of Bath, Me., is in possession of a rare curiosity, a knowledge of which may ultimately lead to some important pathological results. A child accidentally swallowed several metallic eyes—a well-known article, manufactured of silver-plated wire, and used mostly by ladies in fastening their dresses. In due time they were voided—and, to the astonishment of all, each eye was completely threaded by a worm, of the common size, from five to seven inches or more in length. Some had caught three; and in others, the worm had succeeded in passing through two of the rings, or parts which are stitched to the garment. But they were all of them so securely confined that they cannot be extricated. Under ordinary circumstances, when other remedies fail as a vermifuge, would it not be justifiable to prescribe a dose of hooks and eyes! A fact so singular as the one we have here related, should not be lost sight of; since it may give rise to a new mode of expelling from the body those alarming tenants of the intestinal tube, which sometimes maintain their position against all medications, producing extremely acute suffering, protracted misery, and even death.

A Button ejected from the Nostril.—For the last three years, a little girl, belonging at Cape Cod, has suffered from what was supposed to be a polypus of the nose, and consequently medical gentlemen were consulted with reference to it. All the while a portion of it has been in sight, just within the margin of the left nasal cavity. About two months since, she came to this city for advice, and some conversation was had in regard to the removal of the tumor by the knife. A fetid, purulent discharge, offensive to sight as well as to smell, has all the while been kept up, besides a diffused inflammation in the neighborhood. Before submitting to a surgical operation, it was suggested that the child had better try the effects of powerful sternutation, which she did by snuffing up pulverized bayberry bark. She was thus made to sneeze several times a

day, vigorously, and in one of these regular trials for dislodging the polypus, last week, a *covered vest button* was ejected! We examined it ourselves carefully, it having been brought by the child herself for that purpose—her grandmother imagining that it was a kind of small shell fish known at the Cape. Thus, after a tedious, unnecessary period of suffering for three entire years, the patient was relieved in the manner described, and is now entirely well. She might, of course, have been relieved in ten seconds, with a pair of forceps, at any time.

Improved Glass Syringes.—Mr. Charles H. Call, druggist, No. 1 Bowdoin square, has manufactured an instrument that cannot fail of being exceedingly useful—since it is precisely the thing that almost every practitioner has felt the want of in the course of business. It is an improved glass syringe, having a tubular neck beyond the distal extremity of the piston, about six inches long—terminating in a smooth globe, perforated by several small orifices. The advantages which this possesses over any sort of metallic syringe, on the score of cleanliness alone, are manifest. Its delicate surface is another excellent property. It entirely eclipses the lately-devised glass syringes, heretofore mentioned, which are merely furnished with a short, small pipe, like the common cheap gonorrhœal kind. For cleansing deep ulcers, fistulous openings, &c., this contrivance has never been surpassed. But there is still another property belonging to it, that will be appreciated alike both by the physician and the patient. For uterine injections, nothing within our recollection will compare with it; and it might with propriety be designated *Call's Vaginal Syringe*, to distinguish it from all others, since its superiority must be acknowledged in every case where it is important to apply medicinal agents under such circumstances as we have indicated.

Another Tooth-key.—Mr. Moses J. Hill, of Bloomfield, Lagrange Co., Indiana, has taken out a patent for a new tooth-key—the advantages of which, above all others, are thus set forth in the declaration, viz., "for combining a friction roller with the bolster of the ordinary key for extracting teeth, in such a manner as that said friction roller shall constitute the bearing part of the bolster, in the operation of extracting a tooth." We have little faith in the improvements, as they are improperly called, on teeth extractors. The old principle, as far as we have had an opportunity for observing, is invariably retained, but lumbered up with useless apparatus, as perplexing to manage as a Brunswick saw-mill. When the dentists, such as the public have confidence in as men of experience and nice mechanical tact, discover something to recommend in the construction of a tooth instrument, then it will be worth while to encourage the inventor. There is now about as much quackery in these things, as in trusses and abdominal supporters; which are excellent articles in a certain way—but when the patentees begin to represent them as being infallibly good for the whole category of human infirmities, like Brandreth's pills or Wild's candy, it behooves prudent people to guard against the imposition.

Membership of the Boston Medical Association.—Whenever a gentleman is admitted to a membership, notice is sent to every one belonging to the Society, or should be, that each one may know the fact. Once it was

customary to have these notices sent to the residences of the members; but of late, they come to hand through the post office. Some of the profession do not hesitate to say that it is an imposition and an insult to tax them in this unwarrantable manner. It is not the one cent of which they complain, but the principle involved in it. Those receiving their letters by the penny post, are compelled to pay three cents a piece for these unwelcome messengers. To obviate all unkind feelings, and to prevent any further repetitions of the offence, for we are assured that some consider it an annoyance to pay postage, however small the amount, when the business is not their own, it would be well for the Secretary to suggest to each newly-initiated gentleman, who is the one most interested in the distribution of the notices, that if sent through the post office, they ought to be paid for by himself. It is of no use to be mealy-mouthed in the matter any longer, since the subject is one of free conversation.

To Correspondents.—Dr. Bartlett's case of typhoid fever will appear next week.

Married,—In Boston, Dr. J. W. Taylor, of the U. S. N., to Miss A. E. Parker. —In Pontiac, Michigan, Dr. Robert Gilfillan, of White Lake, to Miss Agnes D. Voorhis, of Pontiac.—In Southington, Conn., on the 21st June, Frederick A. Hart, M.D., to Miss Lucretia S. Lee.

Died,—In New York, Dr. John Patten Emmet.—At Groton, Vt., Dr. Horatio W. Heath, 39.—In Baker Co., Georgia, Isaac P. Hersey, M.D., 37, formerly of Cambridge, Mass., and late of New York.

Number of deaths in Boston for the week ending Aug. 27, 48.—Males, 28; Females, 20. Stillborn, 5.
Of consumption, 5—lung fever, 2—inflammation of the bowels, 3—inflammation of the lungs, 1—dropsy on the brain, 1—typhus fever, 1—scarlet fever, 3—cholera infantum, 4—disease of the lungs, 1—infantile, 7—teething, 1—intemperance, 1—marasmus, 2—measles, 1—diarrhœa, 1—cholera morbus, 1—dysentery, 1—disease of the liver, 1—dropsy on the brain, 1—scrofula, 1—pleurisy, 1—debility, 1—canker, 2—croup, 1—paralysis, 1—decline, 1.

BOYLSTON MEDICAL PRIZE QUESTIONS.

THE Boylston Medical Committee, appointed by the President and Fellows of Harvard University consists of the following physicians:

JOHN C. WARREN, M.D.	WALTER CHANNING, M.D.	ENOCH HALE, M.D.
GEORGE C. SHATTUCK, M.D.	GEORGE HAYWARD, M.D.	JOHN WARE, M.D.
JACOB BIGELOW, M.D.	JOHN RANDALL, M.D.	EDWARD REYNOLDS, M.D.

At the annual meeting of the Committee, August 3, 1842, the Boylston Premium of fifty dollars value was awarded to WILLIAM A. DAVIS, M.D., of Springfield, Massachusetts, for the best dissertation on "The diseases of the kidney; and the changes which occur in the appearance and composition of the urine in health and disease."

The questions for 1843 are—

1st. The best method of warming and ventilating rooms for preventing and curing disease.

2d. The structure and diseases of the Teeth, with a numerical solution of the question, can caries of the teeth be retarded by mechanical processes?

Dissertations on these subjects must be transmitted, post paid, to John C. Warren, M.D., Boston, on or before the first Wednesday of April, 1843.

The following questions are proposed for 1844:

1st. To what extent is the human system protected from smallpox by inoculation with the cowpox? Is the protection increased by re-vaccination, and if so, under what circumstances?

2d. In what cases, and to what extent, is the division of muscles, tendons, or other parts, proper for the relief of deformity or lameness?

Dissertations on these questions must be transmitted as above, on or before the first Wednesday of April, 1844.

The author of the best dissertation on either of the above subjects, will be entitled to a premium of fifty dollars, or a gold medal of that value, at his option.

Each dissertation must be accompanied by a sealed packet, on which shall be written some device or sentence, and within shall be enclosed the author's name and residence. The same device or sentence is to be written on the dissertation to which the packet is attached.

All unsuccessful dissertations are deposited with the Secretary, from whom they may be obtained, if called for within one year after they have been received.

By an order adopted in 1826, the Secretary was directed to publish annually the following votes, viz.:

1st. That the Board do not consider themselves as approving the doctrines contained in any of the dissertations to which the premiums may be adjudged.

2d. That in case of the publication of a successful dissertation, the author be considered as bound to print the above vote in connection therewith.

ENOCH HALE, *Secretary.*

Boston, August 4, 1842.

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MASSACHUSETTS MEDICAL COLLEGE.

THE Medical Lectures of Harvard University begin annually, at the Medical College in Mason street, Boston, on the first Wednesday in November, and continue four months.

The introductory Lecture is given at 12 o'clock of the above day, in the Anatomical Theatre, by the Professors in rotation.

The following are the courses of Lectures delivered in this College, with the fees annexed.

		Fees.
Anatomy and Operative Surgery,	PROF. WARREN	$15,00
Midwifery and Medical Jurisprudence,	PROF. CHANNING	10,00
Materia Medica,	PROF. BIGELOW	10,00
Principles of Surgery and Clinical Surgery,	PROF. HAYWARD	10,00
Chemistry,	PROF. WEBSTER	15,00
Theory and Practice of Physic and Clin. Med.	PROFS. WARE and BIGELOW	15,00

There is no fee for matriculation. The Hospital and Library are gratuitous. Ticket for Dissecting Room, $5,00. Board is as low as in any of our cities.

The Clinical Lectures in Medicine and Surgery are given on cases in the Massachusetts General Hospital, which are visited by the class three times a week. Surgical operations at the Hospital are frequent. An abundant opportunity is thus furnished to students for practical observation and study.

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WALTER CHANNING, Dean.

JEFFERSON MEDICAL COLLEGE OF PHILADELPHIA.

SESSION OF 1842-43.

THE regular Lectures will commence on the first Monday of November.

ROBLEY DUNGLISON, M.D., Professor of Institutes of Medicine and Medical Jurisprudence.
ROBERT M. HUSTON, M.D., Professor of Materia Medica and General Therapeutics.
JOSEPH PANCOAST, M.D., Professor of General, Descriptive and Surgical Anatomy.
J. K. MITCHELL, M.D., Professor of Practice of Medicine.
THOMAS D. MUTTER, M.D., Professor of Institutes and Practice of Surgery.
CHARLES D. MEIGS, M.D., Professor of Obstetrics and Diseases of Women and Children.
FRANKLIN BACHE, M.D., Professor of Chemistry.

Lectures and practical illustrations will be given at the Philadelphia Hospital regularly through the course, by

DR. DUNGLISON on Clinical Medicine.
DR. PANCOAST on Clinical Surgery.

On and after the first of October, the dissecting-room will be open, and the Professor of Anatomy and the Demonstrator, Dr. Jonathan M. Allen, will give their personal attendance thereto. Clinical instruction will likewise be given regularly at the Dispensary of the College. During the course, ample opportunities will be afforded to students of the school for Clinical Instruction; Professors Dunglison, Huston and Pancoast being medical officers of the Philadelphia Hospital; Professor Meigs of the Pennsylvania Hospital; and Professor Mutter, Surgeon of the Philadelphia Dispensary.

ROBERT M. HUSTON, M.D., *Dean of the Faculty.*

*** Boarding and other personal expenses of students are at least as cheap in Philadelphia as in any other city of the Union.

Ag. 24—tO20